

AMENDMENT TO THE CLAIMS

By this listing, claims 25-50 are added and claims 1-24 have been cancelled without prejudice. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1-24. (Cancelled)

25. (New) Semiconductor layer arrangement, comprising:

a substrate;

a layer being arranged on the substrate, the layer including a first subregion and a second subregion arranged proximate to the first subregion, the first subregion being a decomposable material and the second subregion having a structure of non-decomposable material;

a covering layer positioned on the layer; and

an electrically conductive passivation layer positioned between the structure of non-decomposable material and the covering layer;

wherein the decomposable material is diffusible through the covering layer.

26. (New) The semiconductor layer arrangement according to Claim 24, further comprising an intermediate layer between the substrate and the layer of decomposable material and the useful structure.

27. (New) The Semiconductor layer arrangement of claim in Claim 26, wherein the covering layer and the intermediate layer comprises dielectric material.

28. (New) The layer arrangement as claimed in one of Claims 26 wherein the covering layer and the intermediate layer comprises any one of silicon oxide, silicon nitride, SiLK, porous SiLK, oxazole, porous oxazole, Black Diamond, Coral, Nanoglass, JSR LKD, polybenzoxazole, polybenzimidazole, polyimide, polyquinoline, polyquinoxaline, polyarylene, and polyarylene ether, and combinations thereof.

29. (New) The semiconductor layer arrangement of claim in Claim 24 wherein the substrate comprises silicon.

30. (New) The semiconductor layer arrangement of Claim 24, wherein the covering layer is permeable to decomposable material having decomposed.

31. (New) The semiconductor layer arrangement of Claim 24, wherein the structure of non-decomposable material is an electrically conductive material.

32. (New) The semiconductor layer arrangement as claimed in Claim 31, wherein the structure of non-decomposable material comprises any one of silver, a silver alloy, tungsten, tungsten silicide, aluminum, an aluminum alloy, copper; and copper alloy.

34. (New) The semiconductor layer arrangement of Claim 24, wherein the structure of non-decomposable material is a dielectric material.

35. (New) The semiconductor layer arrangement of Claim 34, wherein wherein the structure of non-decomposable material comprises any one of silicon dioxide, silicon nitride, ceramic material, and combinations thereof.

36. (New) The semiconductor layer arrangement of Claim 24, wherein the decomposable material is thermally decomposable.

37. (New) The semiconductor layer arrangement of Claim 36, wherein the decomposable material comprises any one of polyester, polyether, polyethylene glycol, polypropylene glycol, polyethylene oxide, polypropylene oxide, polyacrylate, polymethacrylate, polyacetal, polyketal, polycarbonate, polyurethane, polyether ketone, cycloaliphatic polymer, polynorbornene, aliphatic polyamide, Novolak, polyvinylphenol, an epoxy compound, copolymer of these compounds, terpolymer and combinations thereof.

38. (New) The semiconductor layer arrangement of Claim 24, wherein the decomposable material is photosensitive.

39. (New) The semiconductor layer arrangement of Claim 24, wherein at least one support structure is formed in the layer arranged between the substrate and the covering layer.

40. (New) The semiconductor layer arrangement of Claim 24, comprising a protective structure running along a lateral boundary of the substrate.
41. (New) The semiconductor layer arrangement of Claim 24, comprising a passivation layer at least partially surrounding the structure.
42. (New) A process for forming a layer arrangement, comprising:
forming a layer on a substrate, the layer including a first subregion and a second subregion arranged proximate to the first subregion, the first subregion having decomposable material and the second subregion having a structure of a non-decomposable material;
forming a covering layer on the layer including the first subregion and second subregion; and
forming an electrically conductive passivation layer at least between the useful structure and the covering layer;
wherein the decomposable material is removable from the layer arrangement by diffusing through the covering layer.
43. (New) The process of Claim 42, further comprising casing the decomposable material to be removed from the layer arrangement.
44. (New) The process of Claim 43, where the decomposable material is caused to be removed from the layer arrangement by thermal decomposition.
45. (New) The Process of Claim 42, wherein the structure is formed from copper and is at least partially sheathed by a passivation layer being formed from any one of cobalt-tungsten-phosphorus, cobalt-tungsten-boron, cobalt-phosphorus or ruthenium and combinations thereof by means of an electroless deposition process.
46. (New) The Process of Claim 42, wherein the structure is formed from copper and is at least partially sheathed by a passivation layer being formed from any one of tantalum, tantalum nitride, titanium nitride, tungsten, tungsten nitride or tungsten carbide and combinations thereof by means of a chemical vapour deposition process.

47. (New) The Process of Claim 42, wherein forming a layer on the substrate further comprises:

- depositing and patterning the decomposable material on the substrate;
- depositing the material of the structure on the substrate; and
- planarizing the surface of the deposited decomposable material and material of the structure.

48. (New) The process of Claim 42, wherein forming the layer on the substrate further comprises:

- depositing and patterning material of the structure on the substrate;
- depositing the decomposable material on the substrate; and
- planarizing the surface of the deposited decomposable material and material of the structure.

49. (New) The process of Claim 42, further comprising forming at least one additional layer stack on the covering layer, the additional layer stack having an additional covering layer on an additional layer comprising decomposable material and a useful structure.

50. (New) The process of Claim 49, wherein structures that are separated by a covering layer are coupled by at least one contact hole being introduced into the covering layer and being filled with electrically conductive material.